



Dealing with **GESTURE LISTENER**



GESTURE LISTENER

Small explanation.

Touch Screens and Multitouch

- Touch Screens lends themselves well to gesture based input.
- This can be used to:
 - Pinch with two fingers (Zoom)
 - Tap / Double Tap
 - Long press
 - Etc.





GESTURE LISTENER

Class

GestureDetector

- LibGDX provides a GestureDetector that lets developers detect a lot of gestures.

Inheritance

```
public class MyGestureListener implements GestureListener{ }
```

Constructor and setter

```
Gdx.input.setInputProcessor(new GestureDetector(new MyGestureListener()));
```



Types of **GESTURES**



GESTURE LISTENER

Override Methods: touchDown

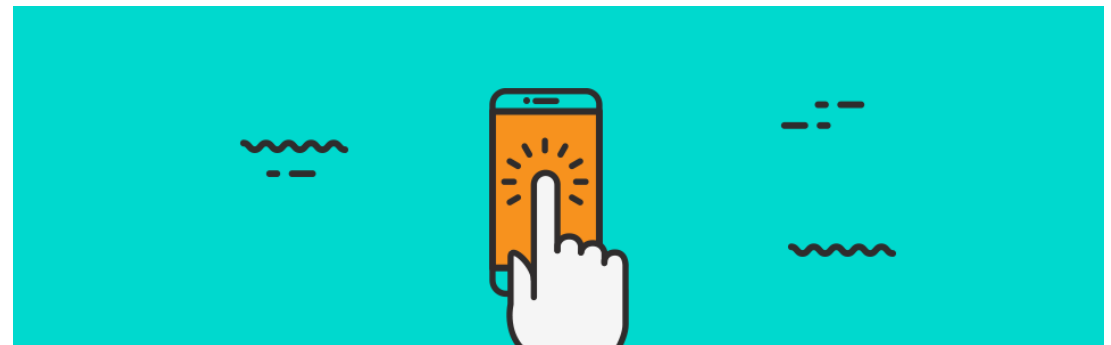
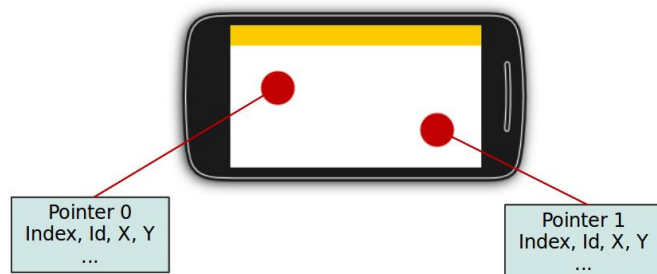
What does

- Called when the screen was touched or a mouse button was pressed.

Parameters

```
public boolean touchdown(float x, → The x coordinate, origin is in the upper left corner  
float y, → The y coordinate, origin is in the upper left corner  
int pointer, → The number of the finger (if you put 2 fingers, 0 is the left and 1 the right)  
int button) → Returns always 0
```

Pointers





GESTURE LISTENER

Override Methods: longPress

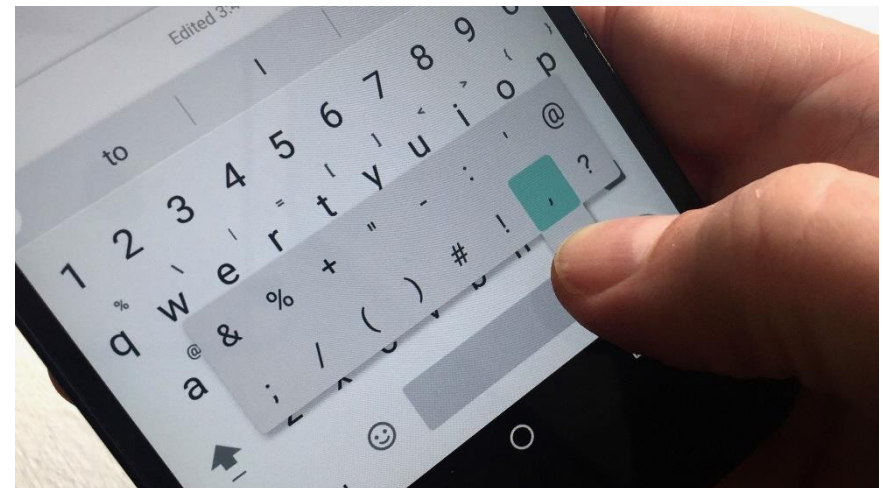
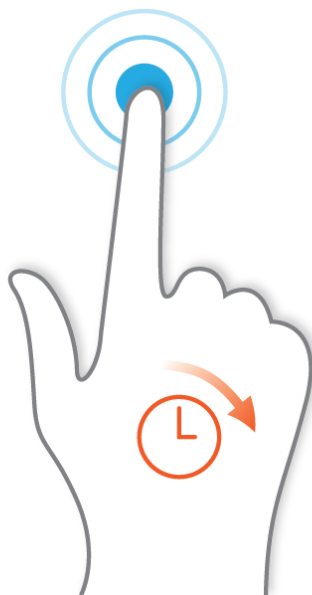
What does

- A user touches the screen for some time.

Parameters

```
public boolean longPress (float x, float y)
```

→ The x coordinate, origin is in the upper left corner
→ The y coordinate, origin is in the upper left corner





GESTURE LISTENER

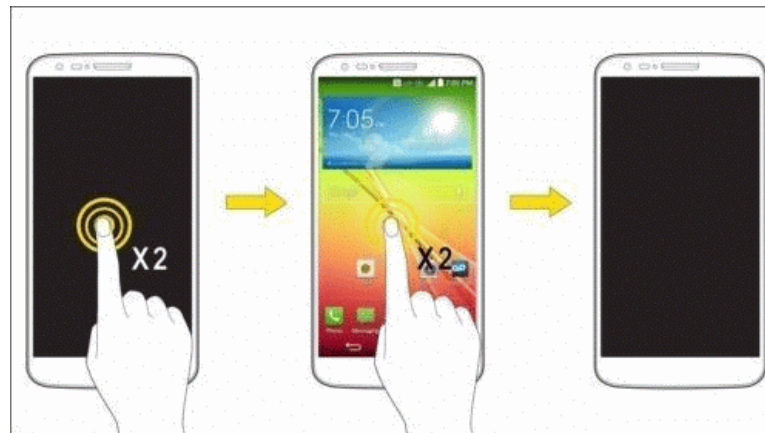
Override Methods: tap and doubleTap

What does

- A user touches the screen and lifts the finger again. The finger must not move outside a specified square area around the initial touch position for a tap to be registered. Multiple consecutive taps will be detected if the user performs taps within a specified time interval.

Parameters

public boolean tap	(float x,	→ The x coordinate, origin is in the upper left corner
	float y	→ The y coordinate, origin is in the upper left corner
	int count,	→ The number of taps if you don't move the finger in the same square area
	int button)	





GESTURE LISTENER

Override Methods: pan

What does

- A user drags a finger across the screen. The detector will report the current touch coordinates as well as the delta between the current and previous touch positions

Parameters

public boolean pan	(float x,	→ The x coordinate, origin is in the upper left corner
	float y	→ The y coordinate, origin is in the upper left corner
	float deltaX,	→ The delta of X between the current and previous touch
	float deltaY)	→ The delta of Y between the current and previous touch





GESTURE LISTENER

Override Methods: panStop

What does

- Called when no longer panning.

Parameters

`public boolean panStop` (float x , → The x coordinate, origin is in the upper left corner
float y , → The y coordinate, origin is in the upper left corner
int `pointer`, → The number of the finger (if you put 2 fingers, 0 is the left and 1 the right)
int `button`)





GESTURE LISTENER

Override Methods: fling

What does

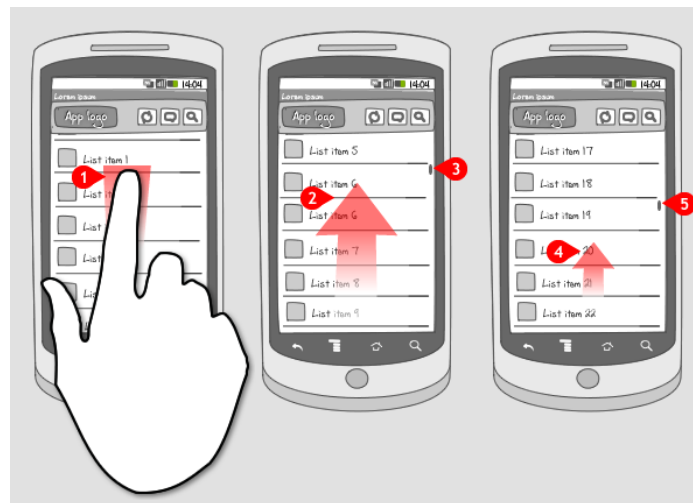
- A user dragged the finger across the screen, then lifted it. Useful to implement swipe gestures..

Parameters

```
public boolean fling(float velocityX ,  
                    float velocityY,  
                    int button)
```

→ The x coordinate, origin is in the upper left corner

→ The y coordinate, origin is in the upper left corner





GESTURE LISTENER

Override Methods: zoom

What does

- A user places two fingers on the screen and moves them together/apart. The detector will report both the initial and current distance between fingers in pixels. Useful to implement camera zooming.

Parameters

public boolean zoom	(float initialDistance , → The x coordinate, origin is in the upper left corner float velocityY) → The y coordinate, origin is in the upper left corner
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GESTURE LISTENER

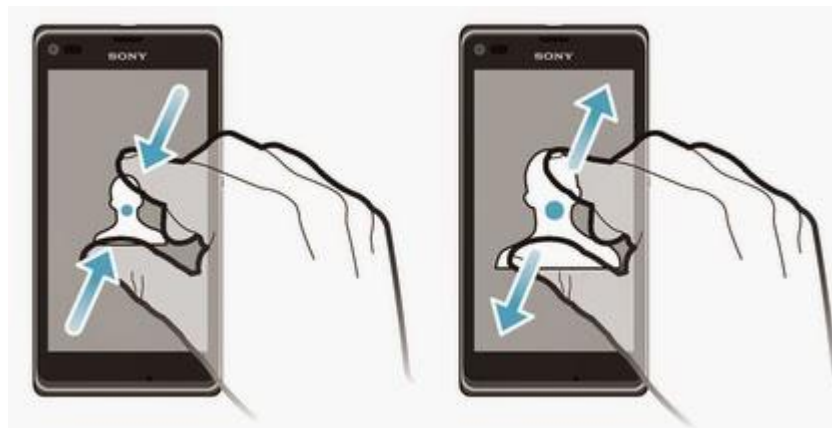
Override Methods: pinch

What does

- Similar to zoom. The detector will report the initial and current finger positions instead of the distance. Useful to implement camera zooming and more sophisticated gestures such as rotation.

Parameters

public boolean pinch	(Vector2 initialPointer1,	→ The x coordinate, origin is in the upper left corner
	Vector2 initialPointer2	→ The y coordinate, origin is in the upper left corner
	Vector2 pointer1,	
	Vector2 pointer2)	





GESTURE LISTENER

Override Methods: pinchStop

What does

- Called when no longer pinching.

Parameters

```
public boolean pinchStop()
```

